

CLAIMS:

1. A method of coding (2) a signal (S) comprising blocks of values to obtain a scalable bit-stream (O,BS), the method comprising the steps of:

representing (20) each block as a sequence of bit planes (BP), wherein most significant bits of the values form a most significant bit plane (BP_{MSB}) and respective less significant bits of the values form respective less significant bit planes; and

scanning and transmitting (21,23) the values in an order of decreasing bit plane (BP) significance;

wherein for each bit plane the step of scanning and transmitting (21,23) is performed in a rectangular scan zone (R_{MAX} , C_{MAX}) starting from a corner of the block.

2. A method as claimed in claim 1, wherein the values are transform coefficients.

3. A method as claimed in claim 1, wherein the coding (2) is performed on each block individually to obtain respective scalable bit-streams for respective individual blocks.

4. A method as claimed in claim 1,

wherein the step of scanning and transmitting (21,23) comprises:

initially marking (22) all values insignificant; and

performing the following steps for each bit-plane ($BP_{MSB} \dots BP_{LSB}$) until a stop criterion is met:

- transmitting (22,23) a bit for each significant value (SC) in a current bit plane (BP);
- transmitting (21,23) an indication whether or not any insignificant values become newly significant in the current bit plane; and
- selecting and transmitting (21,23) dimensions of the rectangular scan zone (R_{MAX}/C_{MAX}) for the newly significant values in the current bit plane, followed by an indication for each not previously significant value inside the scan zone whether the value has become newly significant (NSC) and a sign bit for each newly significant value (NSC).

5. A method as claimed in claim 4,
wherein parts of the bit-stream representing the newly significant values
(NSC) are entropy coded.

6. A method as claimed in claim 3,
wherein a scalable bit-stream is obtained by cyclically and sequentially
scanning selected parts (P1,P2,...) of the respective scalable bit-streams (DCT_1...DCT_N) of
the respective individual blocks.

7. A device (2) for coding (2) a signal (S) comprising blocks of values to obtain a
scalable bit-stream (O,BS), the device comprising:

means for representing (20) each block as a sequence of bit planes (BP),
wherein most significant bits of the values form a most significant bit plane (BP_{MSB}) and
respective less significant bits of the values form respective less significant bit planes; and

means for scanning and transmitting (21,23) the values in an order of
decreasing bit plane (BP) significance;

wherein for each bit plane the means for scanning and transmitting (21,23)
have been arranged to perform the scanning and transmitting for each bit plane in a
rectangular scan zone (R_{MAX}, C_{MAX}) starting from an upper left corner of the block.

8. An encoder (9) comprising:
a device (93) as claimed in claim 7; and
a truncator (95) for truncating the scalable bit-stream (O,BS) at a certain bit-
rate.

9. An encoder (5,7) comprising:
a device (54,76) as claimed in claim 7; and
a memory (55,78) for storing a previous frame;
the device (54,76) being arranged to furnish the scalable bit-stream (O,BS) to
the memory (55,78).

10. A camera system comprising:
a camera (4); and

an encoder (5,7,9) as claimed in claim 8 or 9.

11. A method of decoding (11) comprising:

receiving (111) a scalable bit-stream (O,BS) comprising blocks of values, the values for each block being available in an order of decreasing bit plane significance and for each bit plane scanned in a rectangular scan zone starting from an upper left corner of the block;

regenerating (112) the blocks of values from the scalable bit-stream (O,BS);

and

decoding (113-115) the blocks of values.

12. A scalable decoder (11) comprising:

means for receiving (111) a scalable bit-stream (O,BS) comprising blocks of values, the values for each block being available in an order of decreasing bit plane significance and for each bit plane scanned in a rectangular scan zone starting from an upper left corner of the block;

means for regenerating (112) the blocks of values from the scalable bit-stream (O,BS); and

means for decoding (113-115) the blocks of values.

13. A receiver comprising:

a scalable decoder (11) as claimed in claim 12; and

means for outputting (12) the decoded values.

14. A scalable bit-stream (BS) comprising blocks of values, the values for each block being available in an order of decreasing bit plane significance and for each bit plane scanned in a rectangular scan zone starting from an upper left corner of the block.

15. A storage medium (10) characterized in that a scalable bit-stream (BS) as claimed in claim 14 is recorded on the storage medium (10).

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